



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,182	06/19/2002	Roy E. Rand	124356	1138
23446	7590	10/03/2003	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			KAO, CHIH CHENG G	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,182

Applicant(s)

RAND, ROY E.

Examiner

Chih-Cheng Glen Kao

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 2,3,7,13,14 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "18" has been used to designate two different things in Figures 1 and 2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 2, "OR" and "SOR". A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 2, 3, and 7 are objected to because of the following informalities, which appear to be minor draft errors creating lack of antecedent basis problems: (claim 2, line 4, "said single target ring"), (claim 3, line 2, "said single target"), (claim 7, line 7, "said single target ring"), and (claim 7, line 20, "said single target ring").

The following respective suggestions may obviate the objections: (claim 2, line 4, deleting "single"), (claim 3, line 2, replacing "single target" with - -target ring- -), (claim 7, line 7, deleting "single"), and (claim 7, line 20, deleting "single").

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

5. Claims 13, 14, and 19 are objected to because of the following informalities, which appear to be inconsistent preambles with the base claim: (claim 13, line 1, "The EBT scanning system of claim 12"), (claim 14, line 1, "The EBT scanning system of claim 12"), (claim 19, line 1, "The collimator of claim 12").

These objections may be obviated by the following respective suggestions: (claim 13, line 1, replacing "ECT scanning system" with - -collimator- -), (claim 14, line 1, replacing "ECT scanning system" with - -collimator- -), (claim 13, line 1, replacing "collimator" with - -ECT scanning system- -).

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-9, 11-13, 15-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peschmann et al. (US Patent 4610021) in view of Rand et al. (US Patent 5442673).

7. With regards to claim 1, Peschmann et al. discloses a EBT scanning system (Figs. 1 and 2) comprising: an electron source (Fig. 2, #22), a target ring (Fig. 2, #28-31), a pair of detector arrays (Fig. 2, #14, and Figs. 4A-4D) opposite the target ring, and a collimator arranged concentrically between the target ring and detector arrays, said collimator having apertures to collimate the x-ray into a first collimated beam with a first width and forming at least one of a single and double tomographic slice (Figs. 4A-4D) detected by the pair of detector arrays.

However, Peschmann et al. does not disclose a collimator having interior and exterior walls concentrically arranged with apertures.

Rand et al. teaches a collimator having interior and exterior walls (Figs. 5A-5C, walls created by #502 and 504) concentrically arranged with apertures (Figs. 5A-5C, apertures created by #502 and 504).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Peschmann et al. with the collimator of Rand et al., since one would be motivated to incorporate the collimator for lower costs and improved performance (col. 1, lines 52-57) as shown by Rand et al.

8. With regards to claims 12 and 16, Peschmann et al. further discloses a first set of apertures (Fig. 5, apertures from #78 and 80) to collimate an x-ray beam having a first width, said first beam being detected by first and second detectors when the collimator is in a first position (Fig. 6D), said first beam being detected by one of the first and second detector arrays when the collimator is in a second position (Fig. 6C), and a second set of apertures to collimate a second beam having a second width (Fig. 5, apertures from #74 and 80) said second beam being detected by the first and second detector arrays when the collimator is moved to a third position (implied from Fig. 6A using analogous collimator ring #74 instead of 78), and said collimator being moved to define the two beams having first and second width, respectively (Fig. 5, #74, 78, and 80).

9. With regards to claims 2 and 7, Peschmann et al. further discloses a second set of apertures for a second collimated beam with a second width (Fig. 5, #74, 78, and 80), said collimator being moved between first and second positions to define beams having first and second width respectively (Fig. 5, #78 and 80).

Art Unit: 2882

10. With regards to claims 3 and 8, Peschmann et al. further discloses the collimator moved between positions to direct the collimated beam solely onto one detector in a position and two detectors in another position (Figs. 6C and 6D).

11. With regards to claims 4, 9, 13, and 17, Peschmann et al. in view of Rand et al. suggests a device as recited above.

However, Peschmann et al. does not disclose a collimator including a detector-only region with a first and second set of post-patient apertures.

Rand et al. further teaches a collimator including a detector-only region with a first and second set of post-patient apertures (Fig. 5C).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Peschmann et al. in view of Rand et al. with a detector-only region of the collimator, since one would be motivated to incorporate this for directing the x-rays towards the detector and defining the x-ray beam (Fig. 5C) as implied from by Rand et al.

12. With regards to claims 6, 11, 15, and 19, Peschmann et al. in view of Rand et al. suggests a device as recited above.

However, Peschmann et al. does not disclose a collimator including a source-only region with a first and second set of pre-patient apertures.

Rand et al. further teaches a collimator including a source-only region with a first and second set of pre-patient apertures (Fig. 5B).

Art Unit: 2882

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Peschmann et al. in view of Rand et al. with a source-only region of the collimator, since one would be motivated to incorporate this for directing the x-rays towards the detector and defining the x-ray beam (Fig. 5A-5B) as implied from by Rand et al.

13. Claims 5, 10, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peschmann et al. in view of Rand et al. as applied to claims 1, 7, 12, and 16 above, and further in view of Peschmann (US Patent 4531226).

Peschmann et al. in view of Rand et al. suggests a device as recited above.

However, Peschmann et al. does not seem to specifically disclose a collimator with a source/detector overlap with a first and second set of pre- and post-patient apertures.

Peschmann teaches a collimator with a source/detector overlap (Fig. 3). Rand et al. further teaches a first and second set of pre- and post-patient apertures (Figs. 5A-5C).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Peschmann et al. in view of Rand et al. with a source/detector overlap of Peschmann, since one would be motivated to incorporate this for defining the x-rays beams from the target ring (col. 3, lines 8-15) as shown by Peschmann.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Peschmann et al. in view of Rand et al. with a first and second set of pre- and post-patient apertures, since one would be motivated to

Art Unit: 2882

incorporate this for directing the x-rays towards the detector and defining the x-ray beam (Fig. 5A-5B) as implied from by Rand et al.

Conclusion

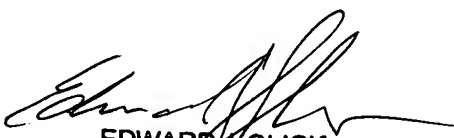
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



gk


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER